PATENT Appl. No. 10/007,276 Attorney Docket No. 450100-03614

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A playback apparatus for reproducing data recorded on a disk

medium by using an optical pickup, said playback apparatus comprising:

RF signal generating means for generating an RF signal on the basis of an analog signal

outputted by said optical pickup;

data signal generating means for generating a data signal by binarizing said RF signal;

defect signal generating means for generating a defect signal for indicating a defect on

said disk medium on the basis of said RF signal;

focus error signal generating means for generating a focus error signal on the basis of

said analog signal outputted by said optical pickup;

focus servo control means for controlling a focus servo of said optical pickup in response

to said focus error signal;

tracking error signal generating means for generating a tracking error signal on the basis

of said analog signal outputted by said optical pickup;

tracking servo control means for controlling a tracking servo of said optical pickup in

response to said tracking error signal;

monitoring means for monitoring said defect signal and thereby detecting a start and an

end of a defect period;

defect period processing control means for controlling said focus servo control means and

said tracking servo control means so that said focus servo control means and said tracking servo

control means perform defect period processing when a result of the monitoring by said monitoring means indicates said defect period,

wherein the defect period processing includes controlling said focus servo control means and said tracking servo control means so that at least one of said focus error signal and said tracking error signal of said optical pickup is held at a previous value; and

post-defect period processing control means for controlling said focus servo control means and said tracking servo control means so that said focus servo control means and said tracking servo control means perform post-defect period processing when a result of the monitoring by said monitoring means indicates the end of said defect period,

wherein the post-defect period processing includes controlling said focus servo control
means and said tracking servo control means so that at least one of said focus servo and said
tracking servo of said optical pickup is driven with an increased servo gain.

2-3. (Canceled)

4. (Original) A playback apparatus as claimed in claim 1,

wherein when said monitoring means detects the start of said defect period during said post-defect period processing performed under control of said post-defect period processing control means, said post-defect period processing control means stops said post-defect period processing, and said defect period processing control means starts said defect period processing.

5. (Original) A playback method for a playback apparatus, said playback apparatus reproducing data recorded on a disk medium by using an optical pickup, said playback method comprising:

said disk medium on the basis of said RF signal;

an RF signal generating step for generating an RF signal on the basis of an analog signal outputted by said optical pickup;

a data signal generating step for generating a data signal by binarizing said RF signal; a defect signal generating step for generating a defect signal for indicating a defect on

a focus error signal generating step for generating a focus error signal on the basis of said analog signal outputted by said optical pickup;

a focus servo control step for controlling a focus servo of said optical pickup in response to said focus error signal;

a tracking error signal generating step for generating a tracking error signal on the basis of said analog signal outputted by said optical pickup;

a tracking servo control step for controlling a tracking servo of said optical pickup in response to said tracking error signal;

a monitoring step for monitoring said defect signal and thereby detecting a start and an end of a defect period;

a defect period processing control step for controlling processing of said focus servo control step and processing of said tracking servo control step so that defect period processing is performed when a result of the monitoring by processing of said monitoring step indicates said defect period,

wherein the defect period processing includes controlling said focus servo control step
and said tracking servo control step so that at least one of said focus error signal and said
tracking error signal of said optical pickup is held at a previous value; and

a post-defect period processing control step for controlling the processing of said focus servo control step and the processing of said tracking servo control step so that post-defect period processing is performed when a result of the monitoring by the processing of said monitoring step indicates the end of said defect period,

wherein the post-defect period processing includes controlling said focus servo control step and said tracking servo control step so that at least one of said focus servo and said tracking servo of said optical pickup is driven with an increased servo gain.

6. (Original) A recording medium for recording a computer readable playback program for reproducing data recorded on a disk medium by using an optical pickup, said program comprising:

an RF signal generating step for generating an RF signal on the basis of an analog signal outputted by said optical pickup;

a data signal generating step for generating a data signal by binarizing said RF signal;

a defect signal generating step for generating a defect signal for indicating a defect on said disk medium on the basis of said RF signal;

a focus error signal generating step for generating a focus error signal on the basis of said analog signal outputted by said optical pickup;

a focus servo control step for controlling a focus servo of said optical pickup in response to said focus error signal;

a tracking error signal generating step for generating a tracking error signal on the basis of said analog signal outputted by said optical pickup;

a tracking servo control step for controlling a tracking servo of said optical pickup in response to said tracking error signal;

a monitoring step for monitoring said defect signal and thereby detecting a start and an end of a defect period;

a defect period processing control step for controlling processing of said focus servo control step and processing of said tracking servo control step so that defect period processing is performed when a result of the monitoring by processing of said monitoring step indicates said defect period,

wherein the defect period processing includes controlling said focus servo control step
and said tracking servo control step so that at least one of said focus error signal and said
tracking error signal of said optical pickup is held at a previous value; and

a post-defect period processing control step for controlling the processing of said focus servo control step and the processing of said tracking servo control step so that post-defect period processing is performed when a result of the monitoring by the processing of said monitoring step indicates the end of said defect period,

wherein the post-defect period processing includes controlling said focus servo control step and said tracking servo control step so that at least one of said focus servo and said tracking servo of said optical pickup is driven with an increased servo gain.

7. (New) A playback apparatus as claimed in claim 1, further comprising

a focus error signal previous value hold unit to hold the focus error signal at the previous value during the defect period processing.

- 8. (New) A playback apparatus as claimed in claim 1, further comprising
- a first post-defect servo control unit to drive the focus servo of the optical pickup with an increased servo gain.
- 9. (New) A playback apparatus as claimed in claim 1, further comprising a tracking error signal previous value hold unit to hold the tracking error signal at the previous value during the defect period processing.
- 10. (New) A playback apparatus as claimed in claim 1, further comprising a second post-defect servo control unit to drive the tracking servo of the optical pickup with an increased servo gain.
- 11. (New) A playback apparatus for reproducing data recorded on a disk medium by using an optical pickup, said playback apparatus comprising:

RF signal generating means for generating an RF signal on the basis of an analog signal outputted by said optical pickup;

data signal generating means for generating a data signal by binarizing said RF signal;

defect signal generating means for generating a defect signal for indicating a defect on
said disk medium on the basis of said RF signal;

focus error signal generating means for generating a focus error signal on the basis of said analog signal outputted by said optical pickup;

focus servo control means for controlling a focus servo of said optical pickup in response to said focus error signal;

tracking error signal generating means for generating a tracking error signal on the basis of said analog signal outputted by said optical pickup;

tracking servo control means for controlling a tracking servo of said optical pickup in response to said tracking error signal;

monitoring means for monitoring said defect signal and thereby detecting a start and an end of a defect period;

defect period processing control means for controlling said focus servo control means and said tracking servo control means so that said focus servo control means and said tracking servo control means perform defect period processing when a result of the monitoring by said monitoring means indicates said defect period,

wherein the defect period processing includes controlling said focus servo control means and said tracking servo control means so that at least one of said focus servo and said tracking servo is not energized; and

post-defect period processing control means for controlling said focus servo control means and said tracking servo control means so that said focus servo control means and said tracking servo control means perform post-defect period processing when a result of the monitoring by said monitoring means indicates the end of said defect period.

12. (New) A playback apparatus as claimed in claim 11, wherein

said post-defect period processing control means includes a resetting means for resetting the length of the post-defect period processing to an initial value to prevent the post-defect period processing from being ended within less than a specified time.

13. (New) A playback method for a playback apparatus to reproduce data recorded on a disk medium by using an optical pickup, the method comprising:

an RF signal generating step for generating an RF signal on the basis of an analog signal outputted by said optical pickup;

a data signal generating step for generating a data signal by binarizing said RF signal;

a defect signal generating step for generating a defect signal for indicating a defect on said disk medium on the basis of said RF signal;

a focus error signal generating step for generating a focus error signal on the basis of said analog signal outputted by said optical pickup;

a focus servo control step for controlling a focus servo of said optical pickup in response to said focus error signal;

a tracking error signal generating step for generating a tracking error signal on the basis of said analog signal outputted by said optical pickup;

a tracking servo control step for controlling a tracking servo of said optical pickup in response to said tracking error signal;

a monitoring step for monitoring said defect signal and thereby detecting a start and an end of a defect period;

a defect period processing control step for controlling processing of said focus servo control step and processing of said tracking servo control step so that defect period processing is performed when a result of the monitoring by processing of said monitoring step indicates said defect period,

wherein the defect period processing includes controlling said focus servo control step and said tracking servo control step so that at least one of said focus servo and said tracking servo is not energized; and

a post-defect period processing control step for controlling the processing of said focus servo control step and the processing of said tracking servo control step so that post-defect period processing is performed when a result of the monitoring by the processing of said monitoring step indicates the end of said defect period.

14. (New) A playback method as claimed in claim 13, wherein

said post-defect period processing control step includes resetting the length of the post-defect period processing to an initial value to prevent the post-defect period processing from being ended within less than a specified time.